

REMARKS

The above amendments and these remarks are responsive to the Office action dated November 21, 2005, and are being filed as a submission under 37 C.F.R. § 1.111. Claims 34-47 are pending in the application. In the Office action, the Examiner rejected each of claims 34-47 as being obvious under 35 U.S.C. § 103(a) as follows:

- Claims 34, 39, and 40 were rejected as being unpatentable over Lam et al., Nature 1991, 354, 82-84 ("Lam"); and Egner et al., Chem. Commun. 1997, 735-736 ("Egner"); and
- Claims 34-47 were rejected as being unpatentable over a combination of six references: (1) Lam; (2) Egner; (3) U.S. Patent No. 4,053,433 to Lee ("Lee"); (4) Blawas et al., Biomaterials 1998, 19, 595-609 ("Blawas"); (5) U.S. Patent No. 6,129,896 to Noonan et al. ("Noonan"); and (6) U.S. Patent No. 6,210,910 to Walt et al. ("Walt").

Applicants traverse the rejections, contending that rejected claims 34-47 are not obvious. Nevertheless, to more particularly point out and distinctly claim aspects of the invention that applicants want to patent now, and to expedite issuance of a patent, applicants have (1) amended claim 34 to include limitations of dependent claim 35; (2) canceled claim 35, without prejudice; (3) amended claim 37 to correct a typographical error; and (4) amended claims 34 and 41 to incorporate clarifying punctuation. Applicants reserve the right to pursue the canceled claim and the amended claims, in original or distinctly amended form, at a later time. Furthermore, applicants have presented arguments showing that claims 34 and 36-47 are patentable over the cited references. Accordingly, applicants respectfully request reconsideration of the rejected claims, and prompt issuance of a Notice of Allowability covering all of the pending claims.

I. Amendments to the Specification

In the Office action, the Examiner stated that applicants must make a specific reference to U.S. Provisional Patent Application Serial No. 60/241,714 in the first sentence(s) of the specification to receive the benefit of this provisional application. Accordingly, applicants have amended the specification by replacing the first paragraph with a re-written priority claim of three paragraphs, each of which is supported fully by the application. Applicants believe that the amended priority claim of the application complies with every condition for receiving the benefit of the recited earlier filing dates.

II. Amendments to the Claims

The present communication amends three of the pending claims, namely, claims 34, 37, and 41. Claim 34 is being amended by the present communication to include all the limitations of claim 35, for the reasons set forth above and below. Claim 37 is being amended to correct a typographical error, and, in particular, to replace “carrier” with “particle.” Finally, claims 34 and 41 are being amended to incorporate clarifying punctuation.

III. Claim Rejections – 35 U.S.C. § 103

The Examiner rejected each of the pending claims in the Office action as being obvious under 35 U.S.C. § 103(a) over a combination of references. In particular, claims 34, 39, and 40 were rejected over Lam and Egner, and claims 34-47 were rejected over a combination of Lam, Egner, Lee, Blawas, Noonan, and Walt (the “six references”). Applicants traverse the rejections, contending that the claims are not obvious over the cited references. Nevertheless, to more particularly point out and distinctly claim aspects of the invention that applicants want to patent now, and to expedite issuance of

a patent, applicants have amended independent claim 34 to include limitations of claim 35, and have canceled claim 35, without prejudice. Each of pending claims 34 and 36-47 is patentable for the reasons set forth below.

A. Claims 34 and 36-40

Claim 34 is directed to a method of conducting a multiplexed experiment:

34. (Currently amended) A method for conducting a multiplexed experiment, comprising:

providing a first class of particles in a first vessel, each particle in the first class having a first optically detectable code, and a second class of particles in a second vessel, each particle in the second class having a second optically detectable code,

attaching a first type of analyte to particles in the first vessel, and attaching a second type of analyte to particles in the second vessel,

forming a mixture of particles from the first and second vessels, the mixture having substantially equal numbers of particles from each vessel,

dispersing a portion of the mixture to an examination site on a surface, the particles of the first and second classes being distributed to random positions across the examination site,

reacting the portion of the mixture with a test substance,

acquiring at least one image of particles at the examination site on the surface, and

using code information from the at least one image to interpret results of the experiment,

wherein each of the particles has at least one flat viewing surface and a shape that self-oriens the viewing surface to face a viewing direction.

In the Office action, the Examiner rejected claim 35 (corresponding substantially to amended claim 34 above) over a combination of the six references. Applicants traverse this rejection. In particular, applicants contend that the Examiner has failed to establish a *prima facie* case of obviousness of claim 35, or any pending claim, because there is no teaching, suggestion, or motivation to modify or combine the six references as proposed by the Examiner, and because there is no reasonable expectation that such a modification or combination would be a success. Moreover, any such teaching,

suggestion, or motivation, and any such reasonable expectation of success, should be in the references themselves; however, in the present case, no teaching, suggestion, or motivation, and no reasonable expectation of success, can be found in the cited references or in the Examiner's arguments in Office action.

The Examiner discusses the claim limitation, found in amended claim 34, "at least one flat viewing surface and a shape that self-orient the viewing surface to face a viewing direction" on pages 9-11 of the Office action. The Examiner admits, on page 9 (last paragraph) of the Office action, that the combined references of Lam and Egner, which relate to bead assays, fail to teach this limitation. However, the Examiner asserts, on pages 9 (last paragraph) and 10 (first paragraph) of the Office action, that the combined references of Lee, Blawas, Noonan, and Walt teach that microcarriers can have generally a flat shape with two substantially parallel planar sides. The Examiner specifically cites Lee in support of this proposition. However, as stated above, neither the cited references nor the Examiner in his arguments provides any teaching, suggestion, or motivation for this combination, or any reasonable expectation of success.

Lee relates to tagging, not supporting or carrying, with color-coded microparticles. The microparticles are disclosed to be used for "tagging individual units of production of a substance" (col. 2, lines 19-20). The "individual units of production" apparently relate to relatively large units of manufacture. For example, Lee states that "the method of the present invention is particularly well suited for the tagging of bulk materials such as grains and chemicals" (col. 5, lines 58-60; emphasis added by applicants). In addition, Lee indicates that the microparticles should be used as minor

components or tracers, not supports or carriers, “in an amount ranging from 0.0001 to 1.0 part by weight for every 100 parts by weight of bulk material” (col. 6, lines 1-5). Lee further states that “to facilitate homogeneous distribution, the microparticles should be tack-free at room temperature” (col. 6, lines 5 and 6). In other words, the microparticles are mixed with, but are not attached to, the bulk materials that they tag. Lee thus does not disclose attachment of particles to any chemical or other analyte and thus does not teach or suggest the use of the microparticles to support or carry attached analytes in any type of experiment and particularly not multiplexed experiments. Instead, Lee teaches away from such use by suggesting conditions (e.g., “tack-free”) that reduce or minimize attachment, even incidental attachment. In the absence of any teaching or motivation, there can be no reasonable expectation of success.

In summary, it would not have been obvious to combine the six references identified by the Examiner to achieve the invention claimed in amended claim 34, because there is no teaching, suggestion, or motivation to make this combination, and no reasonable expectation of success. On the contrary, applicants suggest that the Examiner is using impermissible hindsight to make the combination and further suggest that the imagination and foresight necessary to arrive at subject matter created by a combination of the cited six references should qualify as rising to the level of invention under even the most stringent criteria. Therefore, claim 34, as amended, should be allowed. Claims 36-40, which depend from claim 34, also should be allowed for at least the same reasons as claim 34.

B. Claims 41-47

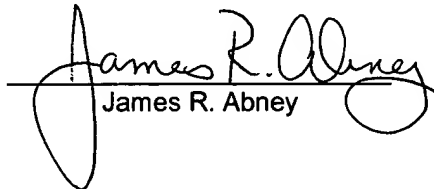
Claim 41 was rejected as being unpatentable over a combination of the six references. However, for the reasons set forth above, applicants contend that it would not have been obvious to combine the six references, because the Examiner again has failed to establish a *prima facie* case of obviousness. In particular, none of the cited six references, taken alone or in combination, teaches or suggests "using the images to develop a mask for the particles of the same class, and detecting one or more reporting modalities within the mask," as recited in part by claim 41. Accordingly, for at least these reasons, claim 41 should be allowed. Claims 42-47, which depend from claim 41, should be allowed for at least the same reasons as claim 41.

IV. Conclusion

Applicants believe that this communication is fully responsive to the Office action, and that the claims are currently in condition for allowance. However, if there are any remaining matters, or if it would otherwise advance prosecution of the application, the Examiner is encouraged to call Stan Hollenberg (Reg. No. 47,658) or the undersigned attorney, both at (503) 224-6655.

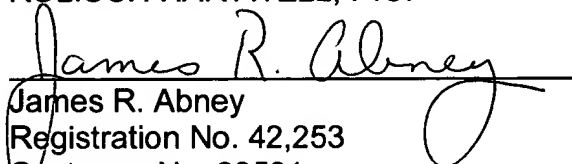
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